CHAPTER 9
ENVIRONMENTAL INVENTORY

The SR 99 North Corridor Study is a pre-design, planning-level study that does not require a State Environmental Policy Act (SEPA) review or a National Environmental Policy Act (NEPA) review. Planning-level studies are categorically exempt from SEPA under WAC 468-12-800(3), and are categorically excluded from NEPA under 23 CFR section 771.117(c)(1). Since this is a pre-design study, an inventory of environmentally sensitive areas along the corridor has been conducted and will be available as reference material for developing a SEPA or NEPA document.

As presented in Figure 9-1, a SEPA review or a NEPA review will occur before any decision is made to proceed to the design Plans, Specifications, and Estimates (PS&E) stage of implementing the final corridor improvement recommendations.

Future project development beyond this study's recommendations, including the environmental review, is dependent on the availability of transportation funding. The source of funding will determine who the co-lead agencies would be. If federal dollars are projected, then a NEPA environmental review process will be required. The Federal Highway Administration (FHWA) will be the federal lead agency and the Washington State Department of Transportation (WSDOT) will be the state lead agency.

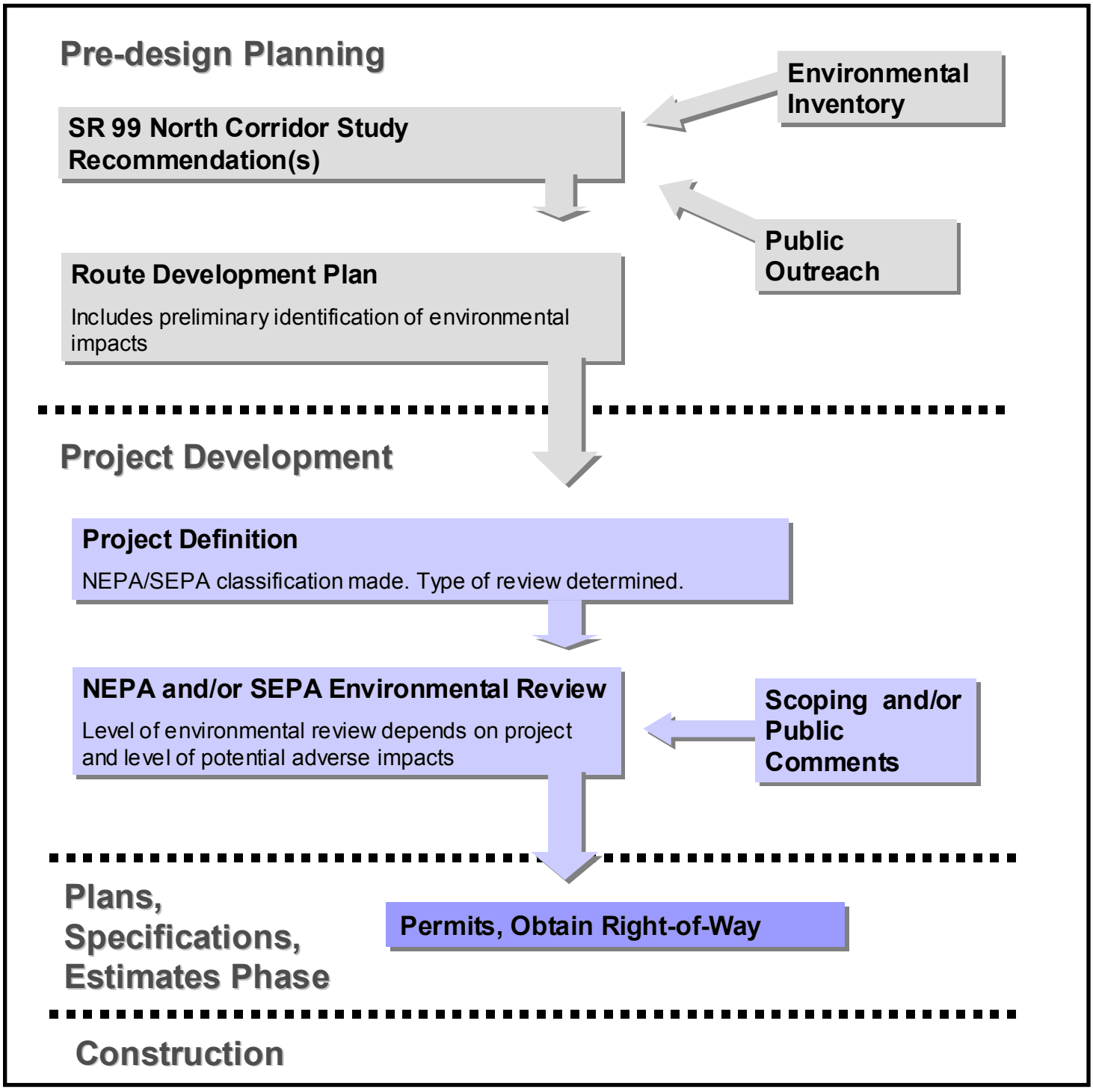
Depending on the presence and significance of probable adverse environmental impacts, an appropriate level of SEPA or NEPA environmental documentation will be chosen by the lead/co-lead agencies. The level of SEPA documentation selected will be based on state SEPA regulations (WAC 197-11). The level of NEPA documentation, if required, if funding is provided through the Federal Transit Administration (FTA), will be determined by the FTA NEPA regulations (23 CFR 771). Depending on the level of SEPA or NEPA review, public scoping meeting(s) may be held.

Results of the SR 99 North Environmental Inventory

To complete the environmental inventory, maps, reports, and other information were collected from various state and local government agencies and reviewed. In addition, a field reconnaissance was conducted along the project area. A summary of the environmental review findings is presented below.

Figure 9-1
Environmental Review Process

The following is an overview of the environmental process required to move from a study recommendation to physical construction of an improvement.



Critical Areas

Critical areas are shown in a series of maps prepared by the City of Seattle. Along SR 99 North, these maps identify locations of steep slopes, landslides, surface water, wildlife habitat, potential liquefaction, and landfills. No wetlands were identified on City critical areas mapping and none were observed during the drive through of the project area. Figures 9-2 through 9-4 show the critical areas mapped within each focus area.

Steep Slopes

Steep slopes predominate as SR 99 North traverses the eastern slopes of Queen Anne Hill. Mapped areas of steep slopes with a grade of 40 percent or greater occur along much of the west side of SR 99 North. Recent condominium development has occurred along the east side of SR 99 North on the steep slopes that continue eastward down the hill and on both sides of Dexter Avenue N. City critical areas maps show intermittent smaller locations of steep slopes (40 percent) north of the Aurora Bridge (George Washington Memorial Bridge) to N. 145th Street.

Detailed geotechnical studies would be needed to examine the impacts of developing the project along a steep slope. Mitigation measures may be necessary to address stabilizing the adjacent slope, reducing erosion, and diverting increased stormwater runoff.

Landslide Areas

Known and potential landslides occur along SR 99 North within the project limits along the Queen Anne Hill segment where steep slopes occur. Recent landslide activity has affected SR 99 North in this area and extensive work has been accomplished to stabilize the landslides by improving drainage, grading, and retaining walls. Other potential landslide areas are shown on the Seattle critical areas mapping east of SR 99 North in the vicinity of Dexter Avenue N.

Detailed geotechnical studies would be necessary to examine the impacts of developing the project along landslide areas. Mitigation measures may be necessary to address stabilizing the adjacent slope, reducing erosion, and diverting increased stormwater runoff.

Figure 9-2
South Focus Area Critical Access

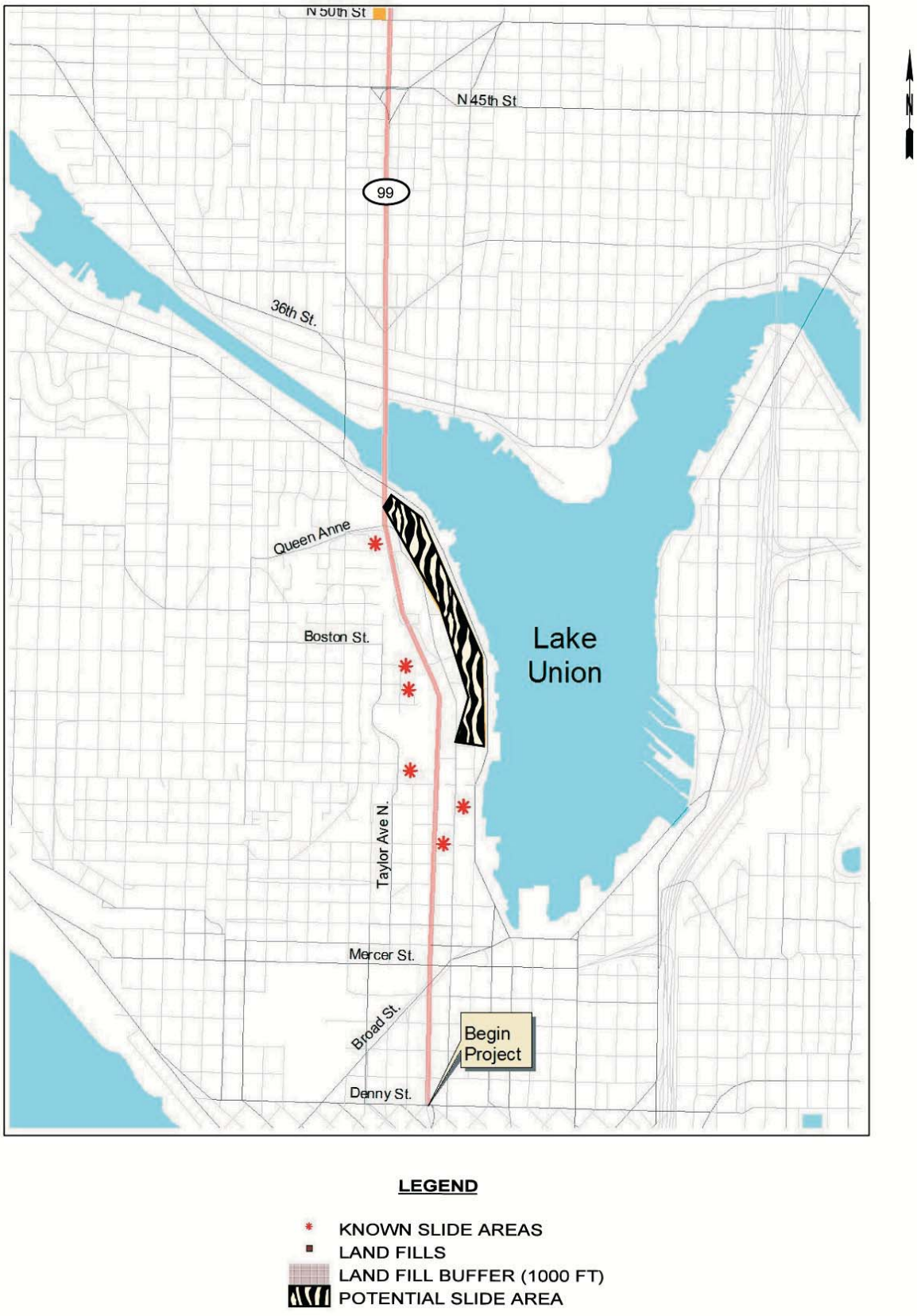


Figure 9-3
Central Focus Area Critical Access

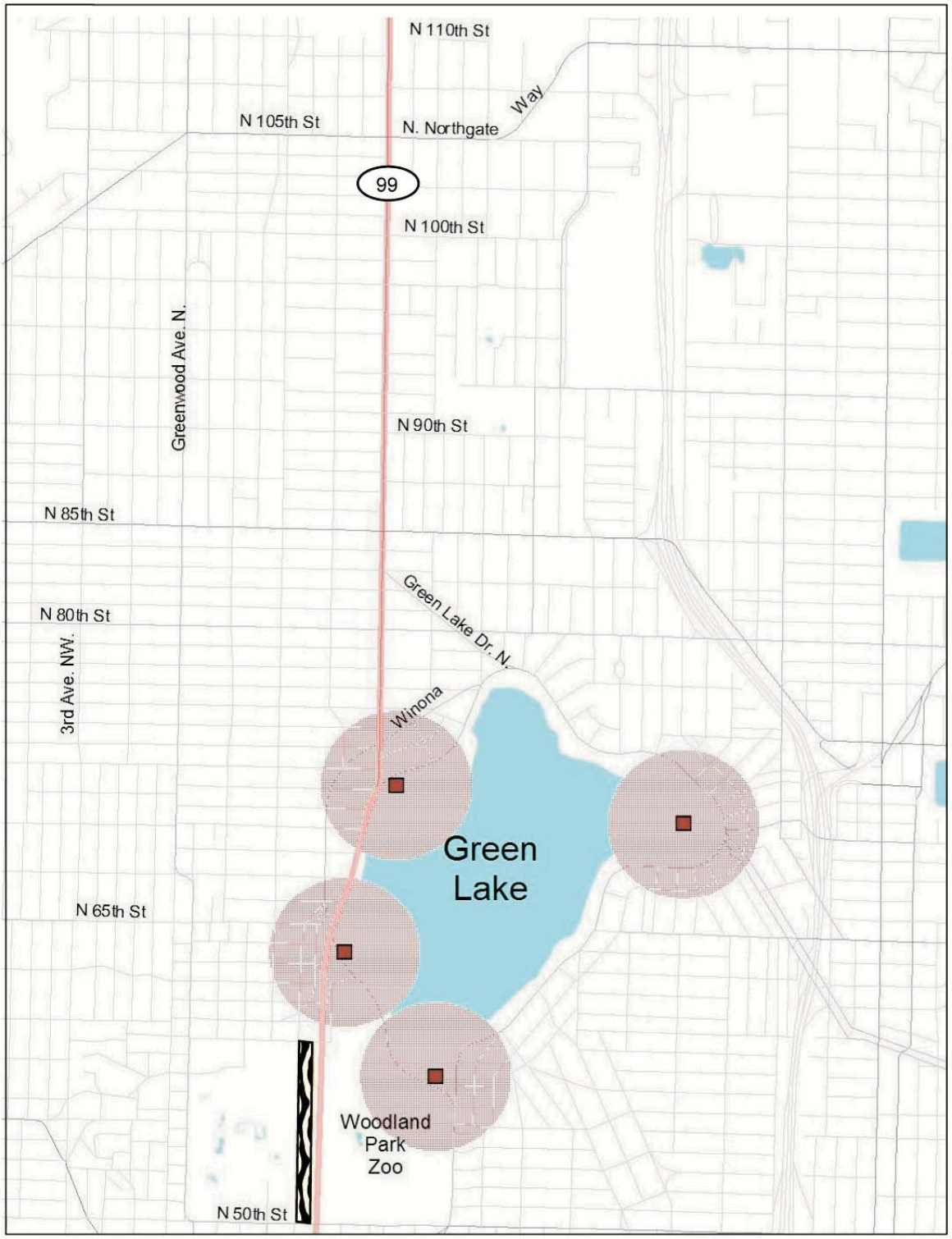
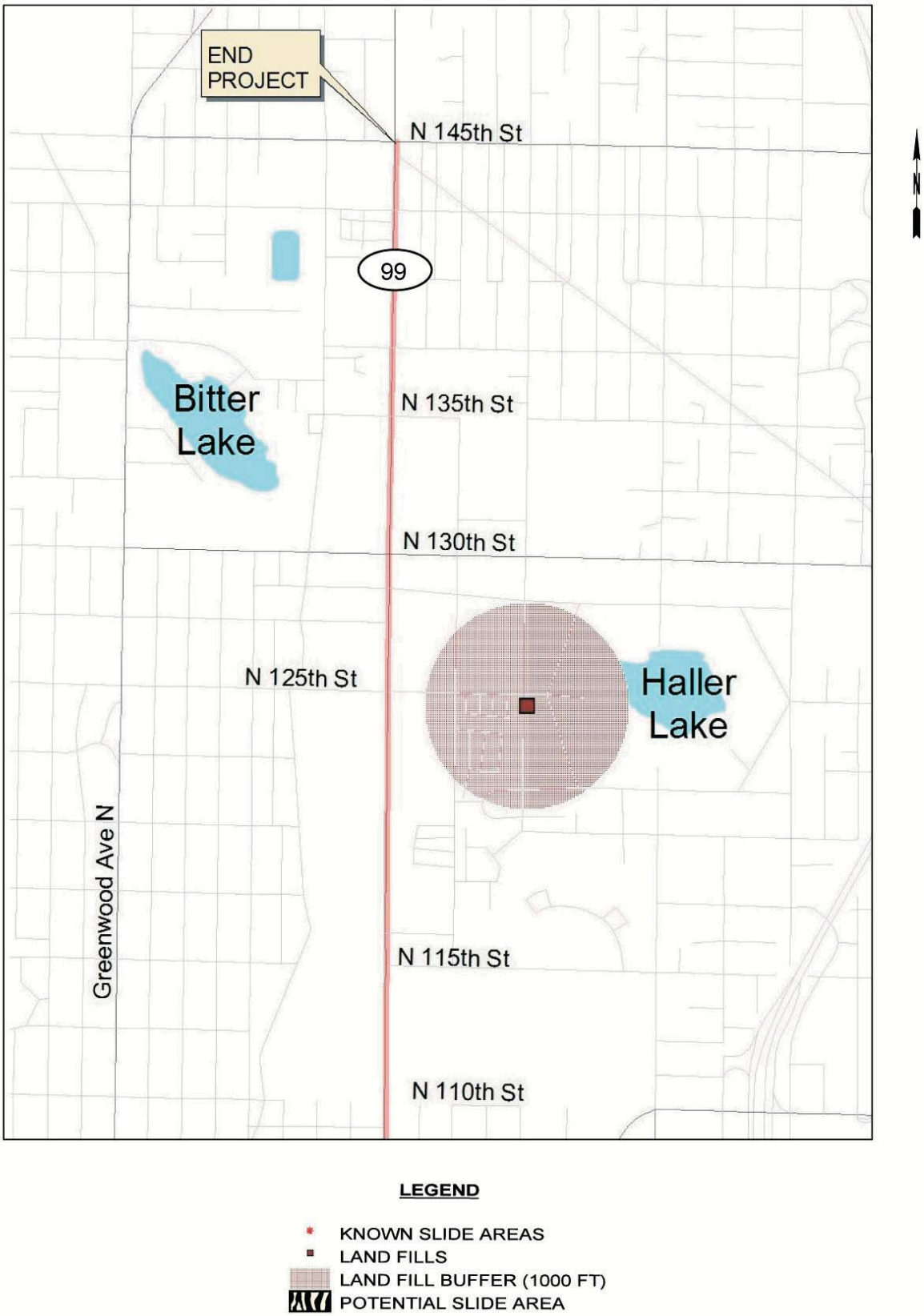


Figure 9-4
North Focus Area Critical Access



Surface Waters

SR 99 North crosses the Lake Washington Ship Canal on the Aurora Bridge. SR 99 North also passes immediately west of Green Lake. Construction debris must be contained to prevent pollutants or hazards to navigation from entering the Lake Washington Ship Canal. A pollution management plan must be developed to control hazardous materials from construction equipment and materials from entering the Ship Canal, Green Lake, or the City stormwater system during construction. Stormwater treatment must be considered to control pollution runoff from the highway surface during regular use and to provide water quality treatment consistent with City of Seattle stormwater system requirements. Other nearby surface waters are farther from SR 99 North, including Bitter Lake and Haller Lake (see Figure 9-4). Within the project area, drainage is carried within a closed drainage system. The limited field observations did not note any locations where SR 99 North crossed streams and the Seattle critical areas maps did not show any crossings. Licton Springs is located about four blocks east of SR 99 North in Licton Springs Park at N. 97th Street and Ashworth Avenue N. Downstream of the park, Licton Springs flows south toward Green Lake in the city storm drainage system.

Wetlands

Although no wetlands were identified on City of Seattle critical areas maps and none were observed during the limited fieldwork, the potential exists for wetlands to occur on or below steep slopes along the Queen Anne Hill segment of the project corridor. A field investigation would be needed if future improvements may expand right-of-way in that area.

If wetlands were discovered in areas affected by improvements, they must be mitigated according to federal, state, and City of Seattle requirements, including avoidance, minimization, and compensation.

Wildlife Habitat

Areas of wildlife habitat are designated on the Seattle critical areas maps along the undeveloped slopes of Queen Anne Hill, adjacent to SR 99 North through Woodland Park, and along Green Lake. Wildlife habitat is scarce along the SR 99 North corridor north of Green Lake.

The presence of sensitive species within the project corridor must be investigated to prevent damage to threatened or endangered wildlife or wildlife habitat. Coordination with the National Marine Fisheries Service, U.S. Fish and Wildlife Service, the Washington State Department of Fish and Wildlife, and the Washington State Department of Natural Resources will be required for crossing the Ship Canal. Compliance with applicable parts of the Endangered Species Act (ESA) would be required.

Potential Liquefaction Area

An area of potential liquefaction is identified on the Seattle critical areas map at the southwest and south sides of Green Lake. Liquefaction may pose a risk to structures during earthquakes.

Geotechnical studies would be necessary to determine the impacts of developing the project within liquefaction areas. Road structures would be constructed to city and state earthquake standards.

Landfill Boundary

The Seattle critical areas maps show 1000-foot buffers around known landfill locations. Such designated buffer areas may encompass methane-producing landfill sites. These areas would need to be investigated further if ground disturbance is included in future improvements. Methane migration could affect worker safety during excavations.

Potential Historic Resources

Contacts with the Washington State Office of Archaeology and Historic Preservation (OAHP) or other agencies were not part of this phase of the work. It is likely that in-depth evaluations of potential historic resources and coordination with OAHP, the Seattle Landmarks Commission, and other agencies would be needed for future improvements along SR 99 North, especially those that require right-of-way acquisition. The following potential historic resources (over 50 years old) were identified primarily through the windshield survey:

- Canlis Restaurant – Located at the south end of the Aurora Bridge, Canlis Restaurant is over 50 years old and was designed by well-known northwest architect Roland Terry.
- George Washington Memorial Bridge (Aurora Bridge) – The bridge is a City of Seattle Landmark and is listed by WSDOT as an historic bridge. Any modifications of the bridge or its setting may require coordination through the Section 106 process of the National Historic Preservation Act.
- Pedestrian overpasses – Overpasses at about N. 42nd Street and in Woodland Park (three) may need to be evaluated for their significance.
- Woodland Park fence – Through Woodland Park, a concrete and iron fence lines SR 99 North behind the sidewalk.
- Bridges – Several bridges (under crossings of SR 99 North) may need to be evaluated for their historic significance, including those at Mercer Street, N. 45th Street, and N. 50th Street.

- Arabian Theater – The Arabian Theater was a neighborhood movie house in the 1950s. The building appears to be currently used by a religious foundation (St. Germain Foundation) and is located on the east side of SR 99 North at about N. 76th Street.

- Pedestrian underpass – A pedestrian underpass is located near the Chubby and Tubby store at about N. 79th Street. It may need to be evaluated for historic significance.

- Commercial and residential buildings – Numerous buildings are located along SR 99 North between the Battery Street Tunnel and the Green Lake area that may need to be evaluated for historical significance. The age (greater than 50 years) of many of these structures suggests the need to consider their historical significance.

During the preliminary design phase, a data search and coordination with the OAHP and other agencies would be needed to determine if significant archaeological or historical resources have been identified in the area of potential effect of the improvements. A professional reconnaissance would be needed to identify if there are presently undetermined cultural resources.

A determination of effect would be needed for any resources that are determined to be on or eligible for the National Register of Historic Places. These procedures are needed for disclosures of potential effects under the State Environmental Policy Act (SEPA) and, if there is federal involvement, with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act. Adverse effects on historic (or cultural) resources will require a full 4(f) evaluation. Other impacts to cultural resources may need to be evaluated under Section 4(f). A more detailed discussion of Section 4(f) is provided in the following section. Evaluations to determine eligibility could be needed. A contingency plan would need to be developed to address any cultural resources discovered during construction.

Parks/Section 4(f)

The sections 4(f) process evaluates impacts when a project affects an historic site or a publicly owned park, recreation area, or wildlife or waterfowl refuge. Several public parks are found adjacent to or near SR 99 North within the project limits. These parks are publicly owned and accessible to the public, so they qualify as Section 4(f) resources. If federal funding is used, such properties cannot be used for transportation purposes unless the proposed preferred alternative is the only feasible and prudent alternative that exists; and all avoidance, minimization and mitigation measures have been taken. The properties that may require evaluation under Section 4 (f) include the historic resources listed in the previous section as well as the following parks and greenbelt:

- Southeast Queen Anne Greenbelt – This greenbelt exists along portions of the steep eastern slope of Queen Anne Hill west of SR 99 North

- B.F. Day Playfield – This playfield is located adjacent to B.F. Day School between Fremont and Linden avenues, two blocks west of SR 99 North between N. 40th Street and N. 41st Street.

- Woodland Park – SR 99 North divides Woodland Park into upper and lower sections. Three pedestrian overpasses connect upper and lower Woodland Park. A concrete and iron fence lines both sides of SR 99 North through the park behind the sidewalks.

- Green Lake Park – SR 99 North skirts the west side of Green Lake Park, which is north of and contiguous with lower Woodland Park. Many people, including those accessing Green Lake across SR 99 North from adjacent neighborhoods, use the trail around Green Lake.

- Bitter Lake Park – The Bitter Lake playfield and community center are located about one block west of SR 99 North at N. 130th Street. It is probably far enough away from SR 99 North that it would not be affected by future improvements.

Noise/Vibration

Much of SR 99 North within the project limits is devoted to commercial uses and, as such, is not usually considered to be noise sensitive. Several potentially noise sensitive locations, however, were noted during the project drive through:

- King Television – The King Television building is located near the south end of the project corridor on the east side of SR 99 North. It is possible that construction activities could generate noise or vibration that could affect activities at the television station.

- Daniel Bagley Elementary School – The Bagley Elementary School is located south of N. 80th Street about one-half to one block east of SR 99 North Commercial buildings fronting on SR 99 North provide a buffer between the highway and the school.

- Evergreen-Washelli Cemetery – SR 99 North divides the cemetery, which is located adjacent to SR 99 North between N. 110th Street and N. 115th Street on the east and between N. 110th and about N. 119th Street on the west side of SR 99 North. Noise from SR 99 North may affect burial activities at the cemetery and the tranquility of the setting.

- Residential areas – Residential areas occur along SR 99 North within the project areas. Noise from construction activities may affect residents.

Noise analysis may be needed to determine project impacts to sensitive noise receptors during construction and during routine highway use. Measures to reduce or contain construction noise should be considered. Based on the noise study outcome, permanent noise reduction structures may be required as part of the project.

Hazardous Materials

The following sites were identified as potentially having hazardous materials issues. Review of agency lists of known sites was not included in this phase of the work. Numerous other potential sites are likely to occur along the SR 99 North corridor within the project limits. An evaluation of sites should be included in planning for future improvements, especially where new right-of-way is needed. Measures for addressing any hazardous material during construction should be prepared.

- Auto repair shop – An auto repair shop is located adjacent to the west side of SR 99 North south of the Aurora Bridge. The condition of the buildings suggests that auto repair and possibly gasoline services have been at the site for a long time. There is a potential for site contamination from automobile related pollutants.
- Service station – A 1950s era gas station (currently an auto repair shop) is located on the west side of SR 99 North where SR 99 North curves toward Green Lake at about N. 65th Street. There is a potential for site contamination from automobile related pollutants.